

# Lighting contracting for companies

## New lighting with innovative financing

An increasing number of companies are interested in converting their lighting systems to modern LEDs to benefit from lower operating and maintenance costs as well as offer better lighting for employees. With the financing and operating model of "energy contracting", companies can often implement such projects without using own capital. A specialised contractor (ESCO) implements the project and the investment is financed by the savings. In Upper Austria, the regional Energy Contracting Programme (ECP) enables and supports this type of refurbishment project. The regional energy agency of Upper Austria, OÖ Energiesparverband, manages this programme and supports companies in the project implementation.

In the last two years alone, 20 Upper Austrian companies modernised their lighting systems – converting 15,000 light points to LEDs, with an average investment of 174,000 Euro per project. The recent advancements in LED technologies were key for this achievement: interesting solutions are available for all application areas and typically offer a potential saving of well over 50 %. LEDs offer high performance, especially in systems with long operating hours. In many cases, switching to LEDs allows for reducing the connected load by at least a third while benefiting from the same illuminance and better light quality. The higher purchasing costs of LEDs are offset by their long service life and low maintenance costs.

### The regional Energy Contracting Programme at a glance

The regional energy agency, OÖ Energiesparverband, supports and advises companies and organisations, and manages the programme on behalf of the regional government.

Achievements in lighting refurbishment in companies in the past two years:

- 20 projects implemented
- 15,000 light points converted to LEDs
- 3.5 million Euro invested
- 395,000 Euro in ECP funding (approx. 20,000 Euro per project)
- Average contract duration: 5 years
- Savings:
  - average per project and year: 164,000 kWh / 16,300 Euro
  - total annually: 3,300 MWh / 325,000 Euro
  - total over the contraction duration: 17,110 MWh / 1,700,000 Euro

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### Paying with savings

Energy contracting is a contractual arrangement between a client (e.g. a company) and a service provider, a so-called "Energy Service Company" (ESCO). Typically, the ESCO finances and implements the energy efficiency investment (for example, the refurbishment of a lighting system to LED technology). The savings are then used to cover the investment and capital costs (or part of them) over the course of a contract period. The main advantage of energy contracting compared to other models is that the ESCO guarantees a certain level of energy savings and is contractually liable for achieving it. After the end of the contract, the company continues to benefit from the efficient lighting, and lower electricity and maintenance costs.

### Upper Austria's energy contracting programme

Establishing an energy contracting market requires a smart approach and extensive communication to build-up trust and know-how. Upper Austria was one of the first regions in Europe to implement a dedicated support scheme to overcome market barriers. The Upper Austrian ECP supports the implementation of energy contracting projects. The key to the programme's success is the combination of funding from the regional government and a comprehensive facilitation service (information and advice) by the OÖ Energiesparverband. Financial support is granted to the energy contracting client. It goes towards reducing either the annual rates paid to the ESCO or the length of the contract. The level of funding is based on the savings guaranteed for the contract period. Up to 40 % of the savings are granted as subsidy (max. 75,000 Euro). The ECP incentive can be combined with other subsidies (e.g. from the national government). In Upper Austria, projects are often financed through a combination of several sources, such as through energy savings, with own funds and with subsidies. In the 20 lighting projects implemented, 66 % of the investment costs were financed through savings and 34 % with down payments or other subsidies.





## Much more than guaranteed savings

According to the companies, guaranteed energy savings are just one of the many advantages of contracting. Other benefits include, above all, the ESCO's expertise in project planning, the high-quality lighting achieved, the savings in maintenance costs, and the long service life of LEDs. There are currently 6 ESCOs in Upper Austria offering this service.

## When does contracting make sense for lighting refurbishment in companies?

Energy contracting is not always the optimal solution for lighting refurbishment projects. Typical key parameters for a successful contracting project include:

- system is 10 years old or more
- minimum of 10 kW installed capacity or at least 20 light points for parking lots
- annual maintenance costs of 15 Euro/light point or higher
- minimum operation time of 8 hours per day

The OÖ Energiesparverband developed a quick-check for the initial assessment of the technical and economic viability of commercial lighting refurbishment projects using contracting (e.g., production, logistics and sports halls, workshops, retail markets, parking lots).

## Energy contracting can take many forms!

The original financing model for contracting projects (e.g. the ESCO finances the project, the company pays monthly instalments) has developed significantly in recent years. A large variety of financing options based on guaranteed savings have already been applied, such as:

- The company pays the investment right away (because funds are available or it has access to cheaper loans than the ESCO). The ESCO guarantees the savings with a bank guarantee.
- The company finances part of the investment through a down payment at the start of the project. The rest is financed by the ESCO. This allows for the implementation of investments that are only profitable in the long term.
- The company pays loan instalments to a bank that is also involved in the project. This requires two contracts (for the financing and for the savings investment) and a bank guarantee from the ESCO.
- The company pays the ESCO monthly instalments that are lower than its previous electricity and maintenance costs. This gives the company a financial advantage as soon as the project starts but requires a longer contract duration.

	Meat processor		Refrigeration equipment manufacturer		Equipment manufacturer	
Lighting of	Halls, cold storage rooms		Halls, warehouses/storage rooms		Halls	
	before	after	before	after	before	after
Installed capacity (kW)	30	13	64.5	31.5	56	31
Electricity consumption (kWh/year)	145,000	64,000	260,000	110,000	157,000	80,000
Electricity savings (kWh/year)	81,000		150,000		77,000	
Electricity costs (€/year)	14,000	6,000	25,000	10,500	16,000	8,000
Savings electricity and maintenance costs (€/year)	12,000		21,600		10,000	
Investments (€)	80,000		225,000		62,000	
ECP subsidy (€)	9,000		17,000		8,000	

Picture source: Signify

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